

362226079410103 RK-245 DENR Upper Piedmont Research Station MW-S4D (Transition zone well)—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2003 to October 2004 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 2003 to October 2004.

pH: May 2003 to October 2004.

WATER TEMPERATURE: May 2003 to October 2004.

DISSOLVED OXYGEN: May 2003 to October 2004.

DISSOLVED OXYGEN, PERCENT SATURATION: May 2003 to October 2004.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from May 2003 to October 2004.

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources, Water Resources Division, as part of the Piedmont/Mountains ground-water study. Dissolved oxygen, percent saturation, is computed using a barometric pressure of 750 mm Hg.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	397, September 16, 19, 23, 25, 2004, October 6, 2004	304, on several days during the period
pH, standard units	8.1, June 21-24, 2004	7.0, on many days during the period
WATER TEMPERATURE, °C	14.8, on many days during the period	14.7, on many days during the period
DISSOLVED OXYGEN, mg/L	1.1, May 1, 2003	0.0, on many days during the period
DISSOLVED OXYGEN, PERCENT SATURATION, %	11, May 1, 2003	0, on many days during the period

EXTREMES FOR CURRENT PERIOD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	397, September 16, 19, 23, 25, October 6	304, on several days during the period
pH, standard units	8.1, June 21-24	7.0, on many days during the period
WATER TEMPERATURE, °C	14.8, on many days during the period	14.7, on many days during the period
DISSOLVED OXYGEN, mg/L	0.1, on many days during the period	0.0, on many days during the period
DISSOLVED OXYGEN, PERCENT SATURATION, %	1, on many days during the period	0, on many days during the period

362226079410103 RK-245 DENR Upper Piedmont Research Station MW-S4D (Transition zone well)—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)	Bromide water, fltrd, mg/L (71870)	Chlor- ide, water, fltrd, mg/L (00940)
MAY													
26...	1415	M	6.8	291	15.5	110	33.7	7.46	3.01	10.3	68	.04	14.9
26...	1830	.0	7.9	358	16.2	130	48.5	2.62	1.20	23.4	62	.03	5.27
27...	1155	.1	7.5	336	16.8	120	43.0	3.65	1.65	21.0	66	.02	7.07

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
MAY											
26...	30.5	46.2	202	<.04	<.06	<.008	<.006	<2	<7.0	332	88.7
26...	21.5	96.3	251	<.04	<.06	<.008	<.006	<2	13	E5	21.2
27...	23.2	79.5	234	<.04	<.06	E.004	<.006	<2	13	30	48.4

Remark codes used in this table:

< -- Less than

E -- Estimated value

M-- Presence verified, not quantified

362226079410103 RK-245 DENR Upper Piedmont Research Station MW-S4D (Transition zone well)—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	305	309	322	332	329	339	351	365	362	373	384
2	308	304	310	322	332	329	340	352	365	362	373	385
3	308	304	---	322	333	329	340	352	365	362	374	385
4	308	304	---	322	333	329	340	353	365	362	374	385
5	308	305	---	322	333	329	341	353	365	361	374	386
6	307	305	311	323	332	329	341	354	366	362	374	386
7	307	304	311	323	332	329	342	354	366	362	374	387
8	307	305	311	323	333	330	343	354	367	362	375	387
9	307	305	---	323	333	331	343	355	367	362	375	388
10	307	305	---	324	333	332	344	355	367	361	375	388
11	307	305	---	324	333	332	344	355	---	362	375	389
12	306	305	---	324	333	332	345	356	---	362	376	390
13	306	305	---	325	333	333	345	356	---	361	377	390
14	306	305	---	325	332	333	346	356	---	362	377	391
15	306	305	---	325	332	334	346	357	---	361	378	395
16	306	306	---	326	332	334	346	357	---	362	378	395
17	306	306	---	326	332	334	346	358	---	364	378	395
18	306	306	---	326	332	335	346	358	---	365	380	395
19	306	306	322	327	331	335	346	359	363	366	380	395
20	306	307	322	327	331	335	347	359	364	367	380	395
21	306	307	322	328	330	335	347	359	363	368	381	395
22	305	307	322	---	330	335	347	360	363	369	381	395
23	305	307	322	327	330	336	348	360	363	369	382	394
24	305	308	321	328	330	336	348	361	363	371	382	394
25	305	308	321	329	330	337	348	361	363	371	382	394
26	305	308	321	330	330	337	349	---	363	371	382	394
27	305	308	321	330	330	337	350	---	363	372	382	394
28	305	309	321	331	330	338	350	---	363	---	383	393
29	305	309	321	331	330	338	350	363	363	373	383	393
30	305	309	321	332	---	339	351	364	362	373	383	393
31	305	---	321	332	---	339	---	364	---	374	383	---
MEAN	306	306	---	---	332	334	345	---	---	---	378	391
MAX	308	309	--	--	333	339	351	--	--	--	383	395
MIN	305	304	--	--	330	329	339	--	--	--	373	384

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

[illegible]

362226079410103 RK-245 DENR Upper Piedmont Research Station MW-S4D (Transition zone well)—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	7.0	7.2	7.5	7.6	7.6	7.6	7.7	7.9	8.0	7.9	7.9
2	7.1	7.0	7.2	7.5	7.6	7.6	7.6	7.8	7.9	8.0	7.9	7.9
3	7.1	7.0	---	7.5	7.6	7.6	7.6	7.8	7.9	8.0	7.9	7.9
4	7.1	7.0	---	7.5	7.6	7.6	7.6	7.8	7.9	8.0	7.9	7.9
5	7.1	7.0	---	7.5	7.6	7.6	7.6	7.8	7.9	8.0	7.9	7.9
6	7.1	7.0	7.2	7.5	7.6	7.6	7.6	7.8	7.9	8.0	7.9	7.9
7	7.1	7.0	7.2	7.5	7.6	7.6	7.6	7.8	7.9	7.9	7.9	7.9
8	7.1	7.0	7.2	7.5	7.6	7.6	7.6	7.8	7.9	7.9	7.9	7.9
9	7.1	7.0	---	7.5	7.6	7.5	7.6	7.8	7.9	7.9	7.9	7.9
10	7.1	7.0	---	7.5	7.6	7.5	7.6	7.8	7.9	7.9	7.9	7.9
11	7.1	7.0	---	7.5	7.6	7.5	7.6	7.8	---	7.9	7.8	7.9
12	7.1	7.0	---	7.5	7.6	7.5	7.6	7.8	---	7.9	7.8	7.9
13	7.1	7.0	---	7.5	7.6	7.5	7.6	7.8	---	7.9	7.8	7.9
14	7.1	7.1	---	7.5	7.6	7.5	7.6	7.8	---	7.9	7.8	---
15	7.1	7.1	---	7.5	7.6	7.5	7.6	7.8	---	7.9	7.8	7.9
16	7.1	7.1	---	7.5	7.6	7.5	7.6	7.8	---	---	7.8	7.9
17	7.1	7.1	---	7.5	7.6	7.5	7.6	7.8	---	7.9	7.8	7.9
18	7.1	7.1	---	7.6	7.6	7.5	7.6	7.8	---	7.9	7.8	7.9
19	7.0	7.1	7.4	7.6	7.6	7.5	7.6	7.8	8.0	7.9	7.8	7.9
20	7.0	7.1	7.4	7.6	7.6	7.5	7.6	7.8	8.0	7.9	7.8	7.9
21	7.0	7.1	7.4	7.6	7.6	7.5	7.6	7.8	8.1	7.9	7.8	7.9
22	7.0	7.1	7.4	---	7.6	7.5	7.6	7.8	8.1	7.9	7.8	7.9
23	7.0	7.1	7.4	7.5	7.6	7.6	7.6	7.8	8.1	7.9	7.9	7.9
24	7.0	7.1	7.4	7.6	7.6	7.6	7.6	7.8	8.1	7.9	7.9	7.9
25	7.0	7.1	7.4	7.6	7.6	7.6	7.6	7.8	8.0	7.9	7.9	7.9
26	7.0	7.1	7.4	7.6	7.6	7.6	7.6	---	8.0	7.9	7.9	7.8
27	7.0	7.1	7.4	7.6	7.6	7.6	7.7	---	8.0	7.9	7.9	7.8
28	7.0	7.2	7.5	7.6	7.6	7.6	7.7	7.7	8.0	---	7.9	7.8
29	7.0	7.2	7.5	7.6	7.6	7.6	7.7	7.8	8.0	7.9	7.9	7.8
30	7.0	7.2	7.5	7.6	---	7.6	7.7	7.8	8.0	7.9	7.9	7.8
31	7.0	---	7.5	7.6	---	7.6	---	7.8	---	7.9	7.9	---
MEAN	7.1	7.1	---	---	7.6	7.6	7.6	---	---	---	7.9	---
MAX	7.1	7.2	---	---	7.6	7.6	7.7	---	---	---	7.9	---
MIN	7.0	7.0	---	---	7.6	7.5	7.6	---	---	---	7.8	---

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

[illegible]

362226079410103 RK-245 DENR Upper Piedmont Research Station MW-S4D (Transition zone well)—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
2	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
3	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
4	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
5	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
6	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
8	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
9	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
10	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8
11	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
12	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
13	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
14	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
15	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
16	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
17	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
18	14.7	14.7	---	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8
19	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
20	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
21	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
22	14.7	14.7	14.7	---	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
23	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
24	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
25	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
26	14.7	14.7	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8	14.8
27	14.7	14.7	14.7	14.7	14.7	14.7	14.7	---	14.8	14.8	14.8	14.8
28	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	---	14.8	14.8
29	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.8	14.8	14.8	14.8
30	14.7	14.7	14.7	14.7	---	14.7	14.7	14.7	14.8	14.8	14.8	14.8
31	14.7	---	14.7	14.7	---	14.7	---	14.7	---	14.8	14.8	---
MEAN	14.7	14.7	---	---	14.7	14.7	14.7	---	---	---	14.8	14.8
MAX	14.7	14.7	---	---	14.7	14.7	14.7	---	---	---	14.8	14.8
MIN	14.7	14.7	---	---	14.7	14.7	14.7	---	---	---	14.8	14.8

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

[illegible]

362226079410103 RK-245 DENR Upper Piedmont Research Station MW-S4D (Transition zone well)—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
3	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
4	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
5	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
7	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
9	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.1	---	---	---
10	0.0	0.0	---	0.1	0.0	0.0	0.0	0.0	0.1	---	---	---
11	0.0	0.0	---	0.1	0.0	0.0	0.0	0.0	---	---	---	---
12	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
13	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
14	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
15	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
16	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
17	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
18	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
19	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
20	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
21	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	---	---	---	---
22	0.0	0.0	0.1	---	0.0	0.0	0.0	0.0	---	---	---	---
23	0.0	0.0	0.1	---	0.0	0.0	0.0	0.0	---	---	---	---
24	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	---	---	---	---
25	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	---	---	---	---
26	0.0	0.0	0.1	0.1	0.0	0.0	0.0	---	---	---	---	---
27	0.0	0.0	0.1	0.1	0.1	0.0	0.0	---	---	---	---	---
28	0.0	0.0	0.0	0.1	0.0	0.0	0.0	---	---	---	---	---
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---	---	---
30	0.0	0.0	0.0	0.0	---	0.0	0.0	---	---	---	---	---
31	0.0	---	0.0	0.0	---	0.0	---	---	---	---	---	---
MEAN	0.0	---	---	---	0.0	0.0	0.0	---	---	---	---	---
MAX	0.0	---	---	---	0.1	0.0	0.0	---	---	---	---	---
MIN	0.0	---	---	---	0.0	0.0	0.0	---	---	---	---	---

362226079410103 RK-245 DENR Upper Piedmont Research Station MW-S4D (Transition zone well)—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	1	---	---	---
2	0	0	0	0	0	0	0	0	1	---	---	---
3	0	0	---	0	0	0	0	0	1	---	---	---
4	0	0	---	0	0	0	0	0	1	---	---	---
5	0	0	---	0	0	0	0	0	1	---	---	---
6	0	0	0	0	0	0	0	0	1	---	---	---
7	0	---	0	0	0	0	0	0	1	---	---	---
8	0	0	0	0	0	0	0	0	1	---	---	---
9	0	0	---	0	0	0	0	0	1	---	---	---
10	0	0	---	0	0	0	0	0	1	---	---	---
11	0	0	---	1	0	0	0	0	---	---	---	---
12	0	0	---	0	0	0	0	0	---	---	---	---
13	0	0	---	0	0	0	0	0	---	---	---	---
14	0	0	---	0	0	0	0	0	---	---	---	---
15	0	0	---	0	0	0	0	0	---	---	---	---
16	0	0	---	0	0	0	0	0	---	---	---	---
17	0	0	---	0	0	0	0	0	---	---	---	---
18	0	0	---	0	0	0	0	0	---	---	---	---
19	0	0	---	0	0	0	0	0	---	---	---	---
20	0	0	---	0	0	0	0	0	---	---	---	---
21	0	0	---	0	0	0	0	0	---	---	---	---
22	0	0	1	---	0	0	0	0	---	---	---	---
23	0	0	1	---	0	0	0	0	---	---	---	---
24	0	0	0	1	0	0	0	0	---	---	---	---
25	0	0	0	1	0	0	0	0	---	---	---	---
26	0	0	1	1	0	0	0	---	---	---	---	---
27	0	0	0	1	0	0	0	---	---	---	---	---
28	0	0	0	0	0	0	0	---	---	---	---	---
29	0	0	0	0	0	0	0	---	---	---	---	---
30	0	0	0	0	---	0	0	---	---	---	---	---
31	0	---	0	0	---	0	---	---	---	---	---	---
MEAN	0	---	---	---	0	0	0	---	---	---	---	---
MAX	0	--	--	--	0	0	0	--	--	---	---	---
MIN	0	--	--	--	0	0	0	--	--	---	---	---